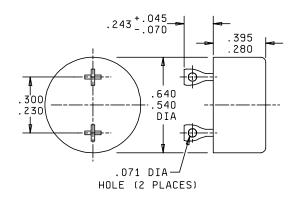
INCH-POUND
MIL-PRF-24236/1K
22 January 2001
SUPERSEDING
MIL-S-24236/1J
25 July 1990

PERFORMANCE SPECIFICATION SHEET

SWITCHES, THERMOSTATIC, (BIMETALLIC), SUBMINIATURE, TYPE I, HERMETICALLY SEALED, SINGLE POLE, SINGLE THROW (SPST), 5 AMPERES, AND LOW LEVEL

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specification and Standards (DODISS) specified in the solicitation: MIL-PRF-24236.



Configuration A (see note 6)

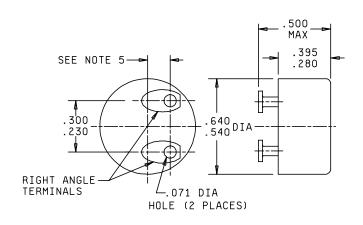
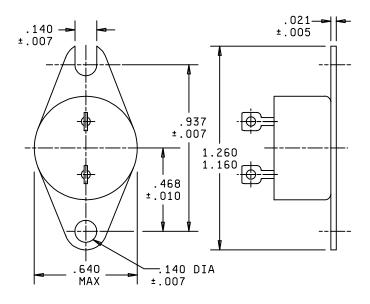
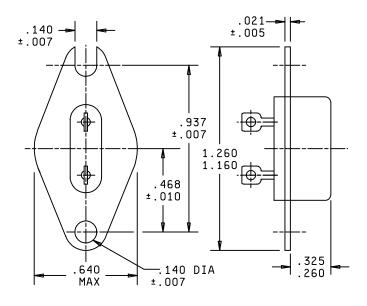


FIGURE 1. Switches, thermostatic, (bimetallic), subminiature, type I, hermetically sealed.

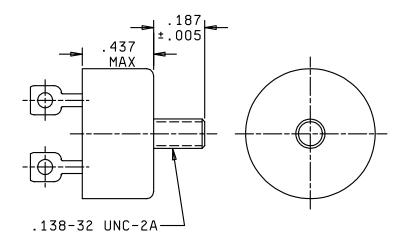


Configuration A1



Configuration A2

FIGURE 1. <u>Switches, thermostatic, (bimetallic), subminiature, type I, hermetically sealed</u> - Continued.



Configuration A3

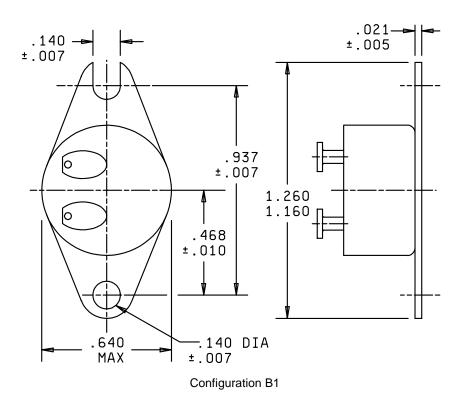
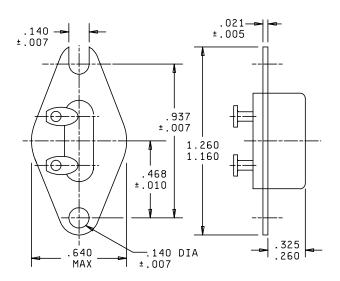
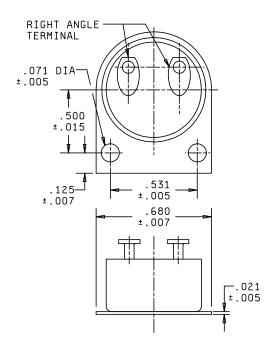


FIGURE 1. <u>Switches, thermostatic, (bimetallic), subminiature, type I, hermetically sealed</u> - Continued.

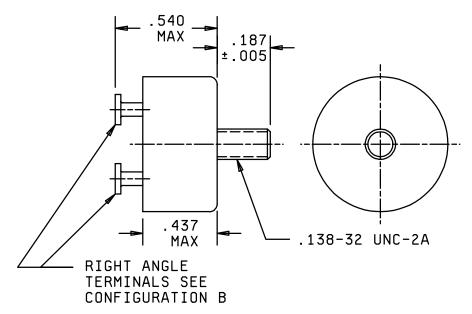


Configuration B2



Configuration B3

FIGURE 1. <u>Switches, thermostatic, (bimetallic), subminiature, type I, hermetically sealed</u> - Continued.



Configuration B4

Inches	mm	Inches	mm
.005	0.13	.280	7.11
.007	0.18	.300	7.62
.010	0.25	.325	8.25
.015	0.38	.395	10.03
.021	0.53	.437	11.10
.045	1.14	.468	11.89
.070	1.78	.500	12.70
.071	1.80	.531	13.49
.125	3.18	.540	13.72
.138	3.51	.640	16.26
.140	3.56	.680	17.27
.187	4.75	.937	23.80
.230	5.84	1.160	29.46
.243	6.17	1.260	32.04
.260	6.60		

NOTES:

- 1. Dimensions are in inches.
- 2. Metric equivalents are given for general information only.
- 3. Unless otherwise specified, tolerance is $\pm .015$ (0.38 mm).
- 4. Exact shape of switch and terminals are optional provided dimensions specified are not exceeded.
- 5. This dimension not to exceed extended envelope of the switch.
- 6. Mounting brackets are not to be furnished.
- 7. Configurations D, D1, E, E1, F, and F1 formerly covered by this specification sheet are now covered by MIL-PRF-24236/20.
- 8. Configurations A1, A2, and A3 use basic switches of configuration A. Configurations B1, B2, and B3 use basic switches of configuration B.

FIGURE 1. Switches, thermostatic, (bimetallic), subminiature, type I, hermetically sealed - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Operating temperature range: -65°F to +500°F.

Class: Class 4, unless otherwise specified in table I, except 80,000 feet altitude.

Mounting: See tables I and II, and figure 1.

Weight: Not to exceed .025 pound.

Operating temperature and tolerances: See table I.

Electrical ratings: See table III.

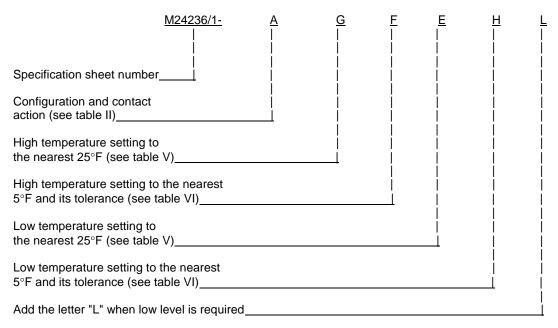
Endurance test: See table III.

QUALIFICATION:

Single submission: Restricted to switch submitted.

Group submission: See table IV.

Part or Identifying Number (PIN): The PIN shall be selected either from table I which consists of M24236/1- (dash number from table I), or if required characteristics are not contained in this table, PINs shall be assigned as illustrated below:



PIN M24236/1-AGFEHL identifies a temperature switch of configuration A which opens on increasing temperature at $65^{\circ}F \pm 5^{\circ}F$ and closes on decreasing temperature at $25^{\circ}F \pm 5^{\circ}F$ and has low level capabilities.

TABLE I. Operating characteristics and dash numbers.

		T	T	T			I	1
Dash number <u>1</u> / <u>2</u> /	Config- uration	Class	Open on increasing temperature	Open on decreasing temper-ature	Toler- ance	Close on increasing temper-ature	Close on decreasing temper-ature	Toler- ance
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°</u> F
0100	А	4	60		±8		40	±5
0105	"	"	60		±5		35	±5
0110	"	"	70		±8		50	±5
0115	"	"	75		±8		45	±8
0120	"	"	80		±5		60	±7
0125	"	"	90		±8		70	±5
0130	"	"	115		±5		80	±7
0131	"	"	165		±5		145	±5
0132	"	"	180		±5		160	±5
0133	"	"	215		±5		195	±5
0135	"	"		150	±5	170		±7
0140	"	"		275	±10	325		±12
0200	A1	"	35		±5		15	±5
0205	"	"	37		±5		20	±5
0210	"	"	45		±5		32	±5
0214	"	"	50		±5		30	±5
0215	"	"	50		±5		35	±5
0220	"	"	50		±5		40	±5
0230	"	"	55		±5		40	±5
0235	"	"	55		±5		40	±5
0245	"	"	60		±5		50	±5
0250	"	"	60		±5		40	±5
0255	"	"	60		±5		45	±5
0260	"	"	65		±5		50	±5
0262	"	"	70		±5		40	±5
0265	"	"	75		±5		60	±5
0270	"	"	85		±5		65	±5
0275	"	"	95		±5		85	±5
0280	"	"	120		±5		100	±5
004	"	"	125		±5		110	±5
0281	"	"	125		±5		120	±5
0285	"	"	128		±5		112	±5
024	"	"	131		±3		120	±5
0290	"	"	135		±5		110	±10
0295	"	"	140		±5		130	±5
025 <u>3</u> /	"	"	145		±5		135	±5
0300	"	"	147		±5		132	±5
0304	"	"	150		±5		120	±5
0305	"	"	150		±5		135	±5
0306	"	"	150		±5		140	±5
0310	"	"	155		±5		135	±5
0315	"	"	158		±5		123	±5
0320	"	"	158		±5		131	±5
0321	"	"	160		±5		140	±5

TABLE I. Operating characteristics and dash numbers - Continued.

	1	I	1					
Dash number <u>1</u> / <u>2</u> /	Config- uration	Class	Open on increasing temper-	Open on decreasing temper-	Toler- ance	Close on increasing temper-	Close on decreasing temper-	Toler- ance
1/ 2/			ature	ature		ature	ature	
			ataro	ataro		ataro	ataro	
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>
026	A1	4	160		±3		150	±5
0325	"	"	160		±5		145	±5
0329	"	"	170		±5		158	±5
0330	"	"	167		±5		158	±5
0331	"	"	170		±5		160	±5
0335	"	"	173		±3		149	±5
0336	"	"	173		±5		158	±5
0340		"	176		±5		160	±5
0345	"	"	180		±5		135	±5
0350	"	"	180		±5		170	±5
0355	"		185		±5		165	±5
0356	"		185		±5		170	±5
0360 0365	"		190		±5		170 176	±5
0365	"		194 200		±5		160	±5
0370	"	"	200		±5		180	±5
0371	"	"	200		±5 ±5		185	±5 ±5
0372	"	"	210		±5 ±8		175	±5 ±5
0379		"	230		±6 ±5		205	±5 ±5
0379		"	212		±3 ±8		192	±5 ±5
0381	"	"	230		±5 ±5		220	±5
0383	"	"	250		±8		210	±8
032	"	"	235		±5		215	±5
0385	"	"	265		±8		180	±5
0390	"	"	270		±8		230	±6
0395	"	"	272		±8		220	±6
0400	"	"	275		±8		200	±6
0405	"	"	350		±12		310	±10
027	"	"		17	±5	31		±5
0410	"	"		19	±5	36		±5
0415	"	"		28	±5	38		±5
0420	"	"		28	±5	45		±5
0425	"	"		32	±9	54		±9
0430	"	"		40	±5	60		±5
0435	"	"		50	±5	65		±5
0440	"	"		62	±5	77		±5
0450	"	"		80	±5	95		±5
0451	"	"		85	±5	95		±5
0455	"	"		86	±5	112		±5
0460	"	"		86	±5	120		±5
0465	"	"		95	±5	115		±7
0470	"	"		110	±8	130		±6
028	"	"		120	±5	130		±5
0475	"	"		120	±5	140		±5

TABLE I. Operating characteristics and dash numbers - Continued.

	I		I				I	
Dash number <u>1</u> / <u>2</u> /	Config- uration	Class	Open on increasing temper-ature	Open on decreasing temper-ature	Toler- ance	Close on increasing temper-ature	Close on decreasing temper-ature	Toler- ance
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>
0.470								
0476	A1	4		130	±5	140		±5
0480	, ,	"		120	±5	160		±5
0485		"		125	±7	150		±5
0486				140	±5	150		±5
0490		,,		130	±8	145		±6
0495	,	"		131	±5	151		±3
0496		,		145	±5	155		±5
003	,	,		133	±5	158		±5
0500		,,		135	±5	175		±5
0501		"		155	±5	175		±5
0505	,,	,,		138	±8	153		±6
0506		,		138	±5	153		±5
0507	,,	,,		144	±5	158		±5
0510				149	±8	165		±6
0515				150	±5	160		±5
0520				151	±5	167		±5
0523		"		165	±5	185		±5
0525				170	±5	200		±5
0530				174	±5	194		±5
0535				175	±5	190		±5
0540		"		176	±5	185		±5
0545				180	±5	210		±6
0549				180	±5	200		±5
0550		"		185	±5	200		±5
0555		,		192	±5	219		±5
0560	"	,,		200	±5	250		±5
0565	"	,,		230	±8	260		±5
0580 0590		"	60 77		±5		40 72	±5
0600	A2	"	80		±5		60	±5
	A2 "	,,	80		±5			±5
0605	"	,,			±5		65 75	±5
0610		"	90 100		±5		75 85	±5
0611	11	"			±5			±5
0615 0620	11	"	120		±5		111 110	±5
0620	11	"	130 131		±5		116	±5 ↓7
0625	11	"			±5		105	±7
0635	"	"	140 145		±5		130	±7
0636	"	"			±5			±5
	11	"	145 150		±5		135 141	±5
0640	11	"	150 159		±5			±5
0645 0650	11	"	158 175		±5		140 160	±5
0655	"	"	175 181		±5		160 165	±5
0660	"	"	185		±5 +5		120	±5 ±5
0000			100		±5		120	±5

TABLE I. Operating characteristics and dash numbers - Continued.

	I							
Dash number <u>1</u> / <u>2</u> /	Config- uration	Class	Open on increasing temper-ature	Open on decreasing temper-ature	Toler- ance	Close on increasing temper-ature	Close on decreasing temper-ature	Toler- ance
					۰=			.=
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>
0665	A2	4	212		±9		185	±9
0670	"	"	225		±8		150	±5
0675	"	"	239		±5		221	±5
0680	"	"	250		±8		220	±6
0684	"	"	480		±25		420	±25
0685	"	"		45	±5	73		±5
0686	"	"		80	±5	100		±5
0687	"	"		95	±5	100		±5
0690	"	"		85	±5	105		±7
0695	"	"		111	±5	120		±5
0700	"	"		116	±5	125		±5
0701	"	"		120	±5	130		±5
0705	"	"		140	±5	150		±7
0710	"	"		140	±5	155		±5
0715	"	"		140	±5	160		±5
0720	"	"		145	±5	160		±5
0725	"	"		160	±5	180		±5
0730	"	"		170	±5	185		±5
0735	"	"		175	±5	225		±5
0736	"	"		240	±5	255		±5
0740	"	"		200	±5	280		±5
0800	A3	"	50		±5		30	±5
0805			80		±5		55	±5
001		3	158		±5		140	±5
0810		4	170		±5		150	±5
0815		"	170		±5		140	±5
0818		"	190		±5		170 177	±5
0820 0825	"	"	197 212		±5		177	±5
0830	"	"	225		±8 ±10		195	±5 ±0
0835	"	"	230		±10 ±5		210	±8 ±5
0033	"	3	230		±5 ±5		210	±5 ±5
0836	"	4	239		±5 ±5		227	±5 ±5
0840	"	"	248		±3 ±14		194	±3 ±10
0845	n n	"	299		±14 ±8		280	±10 ±6
0850	"	"	302		±12		202	±6
0855	"	"		40	±12	60		±5
0860	"	"		100	±10	120		±5
0865	"	"		105	±10	120		±5
0870	"	"		149	±10	158		±4
0871	"	"		130	±10	160		±5
0872	"	"		140	±10	165		±5
0875	"	"		155	±10	170		±5
0876	"	"		150	±10	175		±5

TABLE I. Operating characteristics and dash numbers - Continued.

	I	1					I	
Dash number <u>1</u> / <u>2</u> /	Config- uration	Class	Open on increasing temper-ature	Open on decreasing temper-ature	Toler- ance	Close on increasing temper-ature	Close on decreasing temper-ature	Toler- ance
			G.G. 0	4.0.0			G.G. 0	
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>∘F</u>
			<u> </u>				_	
0880	A3	4		165	±10	180		±5
0881	"	"		155	±10	185		±5
0882	"	"		160	±10	185		±5
0883	"	"		165	±10	195		±5
0884	"			175	±10	205		±5
0885	"	"		180	±6	210		±5
0886		"		185	±5	210		±5
0087	, ,	"		195	±5	220		±5
0888		"		200	±8	230		±8
0889		"		205	±8	230		±8
0891				210	±8	240		±8
0892				220	±8	250		±8
0890		"		248	±8	266		±6
0895	B	"	75		±5		55	±5
0900		"	100		±8		85	±5
0905		"	125		±5		100	±5
0910			160		±5		40	±5
0925		"	194		±15		175	±15
0935		"	212		±8		194	±5
0945	"		229		±3		199	±5
0948	"	"	275		±8		235	±6
0949	"	"	290		±8		250	±6
0950		"	350		±12		310	±10
0955		"	420		±15		350	±10
0960	, ,	"		115	±5	130		±5
0965				173	±5	203		±5
0970		"		180	±5	200		±5
0975		"		215	±8	250		±8
0980				215	±8	245		±8
1100	B1	"	25		±5		10	±5
1105			30		±5		20	±5
1110			43		±5		28	±5
1115	"	"	45 50		±5		30	±5
1116		"	50		±5		30	±5
1120	"	"	50		±5		35	±5
1121		"	50		±5		40	±5
1125	"	"	55		±5		40	±5
1135	"	"	60		±5		40	±7
1140		"	65 70		±5		50	±5
1145			70		±5		40	±5
1150		"	70 75		±5		55 25	±5
1155		"	75 77		±5		35	±10
1159	" "	"	77		±5		37	±5
1160	["		78		±5		58	±5

TABLE I. Operating characteristics and dash numbers - Continued.

		I	I					
Dash	Config-		Open on	Open on	Toler-	Close on	Close on	Toler-
number	uration	Class	increasing	decreasing	ance	increasing	decreasing	ance
<u>1</u> / <u>2</u> /			temper-	temper-		temper-	temper-	
			ature	ature		ature	ature	
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>
			<u> </u>	<u> </u>				<u> </u>
1165	B1	4	80		±5		70	±5
1170	"	"	90		±5		80	±5
1175	"	"	95		±5		60	±5
1180	"	"	95		±5		81	±5
1185	"	"	95		±5		85	±5
1190	"	"	95		±5		81	±5
1195	"	"	99		±5		90	±5
1200	"	"	115		±5		100	±5
1205	"	"	115		±4		105	±4
1210	"	"	130		±5		115	±5
1215	"	"	135		±5		120	±5
1220	"	"	135		±5		125	±5
1225	"	"	140		±5		120	±5
1230	"	"	140		±5		125	±5
1235	"	"	145		±5		135	±4
1240	"	"	150		±5		130	±5
1245	"	"	150		±5		135	±5
1250	"	"	155		±5		100	±10
1255	"	"	155		±5		140	±5
1260	"	"	158		±5		138	±5
1265	"	"	160		±5		120	±7
1270	"	"	160		±5		140	±5
1275	"	"	160		±5		150	±5
006	"	"	164		±5		149	±5
1280	"	"	165		±5		155	±5
1290	"	"	170		±5		130	±10
1295	"	"	172		±5		159	±5
1296	"	"	175		±5		150	±5
1305	"	"	178		±5		158	±5
1310	"	"	180		±5		160	±5
1315	"	"	180		±5		165	±5
1320	"	"	185		±5		175	±5
1325	"	"	190		±5		175	±5
1330	"	"	190		±5		180	±5
1335	"	"	194		±5		180	±5
1340	"	"	196		±5		176	±5
1345	"	"	198		±5		170	±7
1350	"	"	200		±5		180	±5
1355	"	"	200		±5		185	±5
1360	"	"	205		±5		182	±7
1365	"	"	205		±6		230	±8
1370	"	"	207		±8		192	±5
1375	"	"	212		±8		150	±5
1380	"	"	215		±8		195	±5

TABLE I. Operating characteristics and dash numbers - Continued.

Dash	Config-		Open on	Open on	Toler-	Close on	Close on	Toler-
number	uration	Class	increasing	decreasing	ance	increasing	decreasing	ance
<u>1</u> / <u>2</u> /			temper-	temper-		temper-	temper-	
			ature	ature		ature	ature	
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>
1385	B1	4	220		±5		176	±5
1395	"	"	220		±5		200	±5
1400	"	"	230		±5		210	±6
1405	"	"	239		±6		180	±12
1410	"	"	239		±8		209	±6
1415	"	"	240		±8		220	±6
1420	"	"	240		±8		230	±6
1425	"	"	250		±8		230	±6
1430	"	"	260		±8		230	±6
1431	"	"	260		±5		248	±5
1435	"	"	274		±7		194	±15
1440	"	"	274		±7		245	±10
1445	"	"	280		±8		250	±6
1451	"	"	320		±7		305	±7
005	"	3	400		±10		350	±10
1455	"	4		32	±5	77		±5
1460	"	"		35	±5	50		±5
1465	"	"		45	±5	55		±5
1470	"	"		50	±6	65		±5
1475	"	"		50	±5	68		±5
1480	"	"		55	±5	65		±5
1495	"	"		68	±5	95		±5
1505	"	"		70	±5	100		±5
1510	"	"		70	±5	105		±5
1515	"	"		80	±5	100		±5
1520	"	"		85	±5	95		±5
1525	"	"		95	±5	105		±5
1530	"	"		105	±5	120		±5
1540	"	"		115	±5	130		±5
1550	"	"		140	±5	160		±5
1555	"	"		140	±5	165		±5
1285 <u>4</u> /	"	"		165	±5	175		±4
1560	"	"		140	±5	180		±5
1565	"	"		145	±5	160		±5
1575	"	"		156	±6	176		±5
1580	"	"		174	±5	194		±5
1581	"	"		185	±5	195		±7
1585	"	"		185	±5	215		±6
1590	"	"		190	±5	210		±6
1595	"	"		200	±5	250		±6
1600	"	"		210	±8	240		±6
1605	"	"		230	±8	265		±6
1610	"	"		255	±8	300		±6
1611	"	"		305	±10	330		±10

TABLE I. Operating characteristics and dash numbers - Continued.

Dash number <u>1</u> / <u>2</u> /	Config- uration	Class	Open on increasing temper-ature	Open on decreasing temper-ature	Toler- ance	Close on increasing temper-ature	Close on decreasing temper-ature	Toler- ance
			<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>	<u>°</u> F	<u>°F</u>
1700	B2	4	70		±5		61	±5
1705	"	"	160		±5		140	±5
1706	"	"	162		±5		153	±5
031	"	"	200		±5		180	±5
1710	"	"	248		±8		218	±6
1715	"	"	255		±8		220	±6
1720	"	"	325		±12		285	±6
1723	"	"	482		±25		420	±25
1725	"	"		75	±5	125		±5
1730	"	"		96	±5	110		±5
1735	"	"		125	±5	140		±5
1755	"	"		240	±8	260		±6
030	"	"		145	±5	160		±5
1800	В3	"	75		±8		55	±5
1805	"	"	252		±9		203	±9
1810	"	"	325		±12		275	±12

- 1/ Dash number 007 has been superseded by dash ELKLG.
 2/ Dash number 008 has been superseded by dash FPFQF.
 3/ Dash numbers 025 and 029 were interchangeable, therefore 029 has been deleted.
 4/ Dash number 1285 has been relocated to correct operating characteristics.

TABLE II. Configuration and contact action.

Contact action				Co	onfigurati	on			
	Α	A1	A2	A3	В	B1	B2	В3	B4
Open on increasing temperature Open on decreasing temperature Close on decreasing temperature Close on increasing temperature	A B A B	C D C D	E F E F	G H G H	J K J K	L M L M	N P N P	Q R Q R	S T S T

TABLE III. Electrical ratings.

		Altitude		
Load	Sea	level	80,000 feet	Life cycles
	28 V	115 V, 60 Hz	28 V	
	(amperes)	(amperes)	(amperes)	
Resistive	5.0	2.0	5.0	100,000
Inductive Lamp	2.5 1.0	1.0 0.5	2.5 1.0	100,000 100,000
		Low level ratings		
	30 millivolts dc <u>1</u> /			
Resistive	10 milliamperes			100,000

^{1/} Or 30 millivolts peak ac.

TABLE IV. Extent of qualification.

Configuration	Number of samples required	Tests	Qualifies
B-3	All in accordance with qualification table of MIL-PRF-24236	Complete in accordance with qualification inspection of MIL-PRF-24236	
A, A1 A2, B B1, B2, B4	Two each	Visual and mechanical	All
A3	Two each	Visual and mechanical Vibration, shock	

TABLE V. <u>Temperature setting to the nearest 25°F</u>.

Temperature	Code	Temperature	Code	Temperature	Code
-75 -50 -25 0 25 50 75 100	A B C D E F G H	125 150 175 200 225 250 275 300	カひも23Fメヒ	325 350 375 400 425 450 475 500	S T U V W X Y Z

TABLE VI. Temperature setting to the nearest 5°F.

	Tolerance							
Units	±3°F	±5°F	±8°F	±10°F	±15°F	±25°F		
-10 -5 0 +5 +10	A B C D E	F G H J K	L M N P Q	R S T U V	W X Y Z 1	2 3 4 5 6		

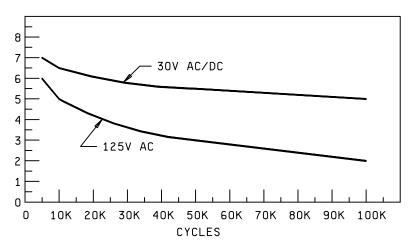


FIGURE 2. Life load chart.

NOTE: Figure 2 is for use in determining approximate life and is provided for information only.

Custodians:

Army - CR Navy - EC Air Force - 11

DLA - CC

Review activities:

Army - AR, AT, AV, MI

Navy - AS, MC, OS

Air Force - 19, 99

Preparing activity: DLA - CC

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